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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/557,297	11/18/2005	Gianni Perdomi	MI 6108 (US)	7324

34872 7590 05/26/2010

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ART UNIT	PAPER NUMBER
1783	

MAIL DATE	DELIVERY MODE
05/26/2010	PAPER

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/557,297
Filing Date: November 18, 2005
Appellant(s): PERDOMI, GIANNI

William R. Reid
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/18/10 appealing from the Office action mailed 09/15/09.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-9 are rejected and pending in the application.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except

for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

4,337,298	Karim et al.	06-1982
WO 9520009	Cometto et al.	07-1995

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karim et al. (U.S. 4,337,298).

Regarding claims 1, 6 and 7, Karim et al. discloses a polymer blend composition of an ethylene copolymer (C1, L50-68), which reads on the instant "interpolymer of ethylene," and a low density ethylene polymer (C1, L35-50), which reads on the instant component IIi. The ethylene copolymer is disclosed as being a copolymer of ethylene and a methacrylic acid ester which reads on the instant comonomer type (1) (C1, L55) and the amount of acrylate is disclosed as being between 4 and 12% which reads on the instant claimed range (C1, L65-68). While no particular density is disclosed at C1, L50-68, given the wide range of melt indexes (i.e. 1-100, C1, L59), one having ordinary skill in the art would expect some of the melt indexes to correspond to resin compositions having densities within the claimed range (i.e. the ethylene methacrylate copolymers in the instant specification at page 12 have melt flow rates of around 2). The low density ethylene polymer (density of less than 0.93 and MFR of between 0.5 and 5) is disclosed as being copolymerized with a higher alpha-olefin of three carbons or more (C1, L35-50). While the exact amount of higher alpha olefin is not disclosed, one having ordinary skill would expect the amount of higher alpha olefin, which is being selected so as to maintain the disclosed density and melt flow rates, to lie within the instant claimed range.

Regarding the relative amounts of ethylene copolymer to LDPE, Karim et al. discloses that the relative amounts of the components in the overall polymer blend are subject to optimization based on the desired end use (C4, L30-50). The relative amounts of ethylene copolymer and LDPE are specifically mentioned as being one such optimizable variable (C4, L38). Hence one having ordinary skill in the art would optimize the relative amounts of the

ethylene copolymer and the LDPE in order to adjust the particular mechanical properties of the film, as suggested by Karim et al.

Regarding the various mechanical strength properties in the instant claims, one having ordinary skill in the art would have adjusted the particular tear and mechanical strength properties of the blend of Karim et al. in order to optimize it for the particular end use (i.e. as suggested at C4, L30-50).

Regarding the preambles of claims 1, 6 and 7 (i.e. polymer blend, container, and stretch wrap film), Karim et al. discloses that the polymer composition has properties which would make it a suitable stock material for a wide variety of applications (C5, L5-50), including laminated into film form (C5, L15-25). One having ordinary skill in the art would expect these properties (especially the adhesive properties) to lend themselves to applications which result in the film being used to contain other articles in a stretch wrap manner.

Regarding claims 2 and 3, Karim et al. discloses all of the limitations as set forth above. Additionally, Karim et al. discloses that the ethylene copolymer be a copolymer of ethylene and methacrylate (C1, L55). Karim et al. also discloses the LDPE contain alpha olefins of three carbons or higher (C1, L45-50).

Claims 4, 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karim et al. (U.S. 4,337,298) as applied to claims 1 and 7 above, and further in view of Cometto et. al (WO 9520009 A1).

Regarding claims 4, 5, 8 and 9, Karim et al. discloses all of the limitations as set forth above. Karim et al. does not disclose the particular composition as instantly claimed for

component II ii. Cometto et al. discloses a a polymer blend comprising a random polymer of ethylene blended with a random interpolymer of propylene

(See page 4, the described polymeric compositions is the polymer blend)

wherein the random polymer of ethylene is an ethylene-butene-1 copolymer (claim 4)

(See page 7, component (a) corresponds to the random polymer of ethylene and a copolymer of ethylene and butene-1 is equivalent to an ethylene-butene-1 copolymer)

and wherein the random polymer of propylene is a propylene-ethylene-butene-1 terpolymer. (claim 5)

(See page 7, component (b) corresponds to the random polymer of propylene and a copolymer of propylene with ethylene and butene-1 is equivalent to an propylene-ethylene-butene-1 terpolymer)

Cometto et. al further discloses that the polymer blend with the particular random polymers of ethylene and propylene has advantages of improved processing characteristics and mechanical properities, including, among others, impact resistance and tear resistance. These properties are improved over the alternative conventional polyethylene polymers, (i.e. the LDPE used in Karim et al.) (See Page 3).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the polymer blend of Karim et. al, by substituting the low density polyethylene with the polymer blend comprising a random polymer of ethylene blended with a random interpolymer of propylene wherein the random polymer of ethylene is a ethylene-butene-1 copolymer and wherein the random polymer of propylene

is a propylene-ethylene-butene-1 terpolymer as taught by Cometto et. al for the purpose of improving the processing characteristics and the mechanical properties.

Modified Karim et al. is silent as to the haze of the film being less than 16% however given the substantially similar polymer blend composition of the components in modified Karim et al. with the instant film, it will, inherently, posses the claimed properties. See MPEP 2112.

(10) Response to Argument

Appellant argues first about the prior art's reading on component II (i) from claim 1 (compenent II (ii) being an alternative material for component II). Appellant argues that component II (i) is not disclosed in the Karim reference because while Karim discloses linear low density ethylene polymers (i.e. produced by a low pressure method) it does not particularly show that these linear polymers are preferred over the non-linear (i.e. high pressure produced) polymers (C1, L35-50). Appellant also argues that while Karim discloses the higher alpha olefins used to create the linear low density polymers (i.e. C3 and higher alpha olefins) it does not particularly show that the instantly claimed alpha olefins are preferred over the one example of an alpha olefin mentioned in Karim that does not fall within the claimed range of alpha olefins (i.e. of the alpha olefins mentioned in Karim only the C3 olefin falls outside of the instant range—the higher alpha olefins would have more carbons and would be within the claimed range). Appellant also argues that while Karim discloses both the density and melt-flow rate as instantly claimed, it does not specifically disclose the amount of higher alpha olefins that would be required to achieve these densities. The examiner considers the relevant section of Karim to read on all of appellant's limitations. The linearity of the low density polyethylene is disclosed

by the low pressure copolymerization process with the higher alpha olefins. The type of alpha olfins as instantly claimed is disclosed with the mention of higher (i.e. higher than C3) alpha olefins being copolymerized with the ethylene. Karim also discloses densities and melt flow rates that fall within the claimed range and one having ordinary skill in the art would know that these densities are controlled by adding more higher alpha olefins (since their incorporation gives the main chain longer branches and makes the polymer less dense because the main chains cannot fold next to one another as easily due to the longer carbon branches). Hence by disclosing the density and melt-flow rate of the linear low density polyethylene, one having ordinary skill in the art would find it obvious to control the amount of the disclosed higher alpha olefins to produce a polymer that falls within the density and melt flow ranges disclosed by Karim. As a result of such an optimization, the instantly claimed amounts of higher-alpha olefins would be obvious.

Appellant then argues against Component I on the grounds that Karim only discloses melt flow rates not specifically the instantly claimed densities. First, the examiner would like to point out that Karim's ethylene copolymer has the same amounts and types of esters as is instantly claimed (i.e. 1 to 18 carbon, methacrylic esters at 4-12%, C1, L50-67). Karim also discloses a wide range of melt flow rates 1-100. Melt flow rate is one of the many properties used to describe certain grades of polymers. Density and molecular weight are other properties that a reference can use to describe the same quality of a general polymer. One having ordinary skill in the art would realize that two types of polymers (i.e. ethylene methacrylic acid copolymers with the same amount and type of methacrylic acid) having the same melt flow rates would have the same density (and also molecular weight properties). Here, Karim discloses a

wide range of melt flow rates which correspond to a wide range of densities. Looking at page 12 of the instant specification, where the same types of polymers disclosed in Karim are listed, the polymers have melt flow rates between 1 and 2, which are both endpoints of the ranges used at C1, L50-67 of Karim, correspond to densities that fall within the instantly claimed range. Therefore, the ethylene copolymer of Karim, having been described as having the same melt flow rates as used in the instant specification, and otherwise having the same ingredients, would be of the same grade and therefore have the same densities as those as instantly claimed.

Appellant also argues that despite Karim's teachings that the blends of the two ethylene polymers (i.e. those corresponding to component I and II in the instant application) would be optimized by one having ordinary skill, C4, L30-50, there would not be any way to optimize the amounts to within the instantly claimed ranges because of the presence of an additional ionomer resin in the Karim reference. First, the instantly recited claims do not prohibit additional ingredients (i.e. they use "comprising" language) and therefore the Karim reference can read on the instant claims even if the ionomer resin is also required. Second, the ionomer resin does not prevent one having ordinary skill from optimize the amounts of the ethylene compositions (I and II) for the particular end uses, as expressly disclosed in Karim, to fall within the instantly claimed ranges.

Appellants arguments related to the rejections incorporating the Cometto reference are substantially similar to those presented above with the appellant only adding that the Cometto reference fails to cure the deficiencies of Karim. The examiner maintains that as explained above there are no such deficiencies in the Karim reference and only wished to add that the Cometto reference teaches a polymer blend which reads on component II (ii) which is an

alternative to component II (i) in the instant independent claims and was used in the previous rejection as an obvious substitute for the linear low density polyethylene taught by Karim.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Michael B Nelson/

Conferees:

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1783

/Christine Tierney/

Supervisory Patent Examiner, Art Unit 1700/C. T./